



# Media Advisory



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## Technology Careers Focus of TARDEC Demonstrations

DETROIT ARSENAL, WARREN, MI — Sparking students' interest in technology-based careers is the purpose of the U.S. Army Tank Automotive Research, Development and Engineering Center's (TARDEC's) Robotics, Engineering and Technology (RET) Week being held at the Macomb Community College Sports & Expo Center Dec. 9 - 11, 2008.

"RET Week is an opportunity to introduce students to technology-based careers through interactive demonstrations with some of today's current and future robotic systems," explained TARDEC Director Dr. Grace M. Bochenek. "Given this field is multidisciplinary in nature we think this gives students and excellent opportunity to demonstrate electrical, mechanical and computer engineering aptitudes. Events like these are important to TARDEC because they help us lay the groundwork for the future of Michigan's engineering and technical workforce."

More than 3,000 Southeastern Michigan seventh to twelfth grade students are expected to take part in five sessions. Each 600-student session will begin with a 25-minute multimedia overview presentation, and then students will break into groups and rotate through six stations.

"The introduction will include how robots are currently used, what they will be doing in the future and how it will change the way we live, work and interact," stated TARDEC Joint Center for Robotics (JCR) Director Dr. James Overholt. "Then we'll present a curriculum to prepare students for furthering their education."

Each station will give 15-minute overviews. The stations are:

- Sensors — the student will be taught how sensors function as the robots' eyes and ears. Multiple sensors work together reconstructing the world around the robots for the operator to interpret.
- Controllers — using human robotic interfaces, students will learn how interactions between robots and humans occur. Common architecture and software can control multiple interfaces and assets.



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- Platforms — will include current robots used by Soldiers and law enforcement officers. This will demonstrate how robots do dull, dangerous and dirty tasks to remove humans from those environments.
- Intelligence — a look into the future of how robots will interact with warfighters as they work side by side with one another. If a robot is presented with a task or situation it does not understand, it immediately notifies the human user to take control or give instructions.
- Mechatronics — contains a manufacturing robot assembly line run by Macomb Community College. Mechatronics combines mechanical engineering, electronic engineering and computer engineering.
- Competitions — explain how students can get involved with junior high-, high school- and university-level competitions. This station contains information about the For Inspiration and Recognition of Science and Technology competitions, Intelligent Ground Vehicle Competition, RoboFest and International Underwater Robotics Competition.

RET Week came about after two TARDEC Intelligent Ground Systems Division members gave a lecture in September 2006 to students in a Utica, MI, high school computer engineering course. The principal was at the lecture, and the student response prompted her to suggest Utica Community Schools (UCS) increase the scope. JCR began the RET community outreach program in March 2007, and May 11, 2007, an RET Day was held at the UCS Instructional Resource Center in Sterling Heights, MI, and the RET Days event was held Dec. 3-7, 2007, at the same location. RET Week was expanded to include schools throughout Southeast Michigan, and the larger venue at Macomb was needed.

Macomb is one of the nation's leading community colleges, providing learning experiences to more than 59,000 students annually. Macomb ranks nationally in the top two percent in the number of associate degrees awarded and as the largest grantor of associate degrees in Michigan. The college's comprehensive educational programming includes pre-collegiate experiences, university transfer and career preparation programs, bachelor degree completion and graduate degree programs, workforce training, professional education and certification, and continuing education and enrichment opportunities.

The Sports & Expo Center is located on Macomb's South Campus, 12 Mile and Hayes roads, Warren, MI.

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Members of the Media and Trade Press are invited to attend RET Week. Please register by calling Bill Dowell at (586) 907-8676 or emailing [William.Dowell2@us.army.mil](mailto:William.Dowell2@us.army.mil)

**Note:** There are image(s) available for use with this release. Caption information is embedded. To download the photo, go to <http://www.tardec.info/pressreleases/>.

TARDEC is the Nation's laboratory for advanced military ground systems and automotive technology. A leading technology integrator for the U.S. Army Materiel Command's Research Development and Engineering Command (RDECOM), TARDEC is headquartered at the Detroit Arsenal in Warren, MI, located in the heart of the world's automotive capitol. TARDEC is a major element of RDECOM and partner in the TACOM Life Cycle Management Command. As a full life-cycle engineering support provider-of-first-choice for all DOD ground combat and combat support weapons and vehicle systems, TARDEC develops and integrates the right technology solutions to improve Current Force effectiveness and provide superior capabilities for the Future Force. TARDEC's technical staff leads research in ground vehicle survivability; mobility/power and energy; robotics and intelligent systems; maneuver support and sustainment; and vehicle electronics and architecture. TARDEC develops and maintains ground vehicles for all U.S. Armed Forces and numerous federal agencies.

For additional information about TARDEC's forthcoming developments and other technologies visit <http://tardec.army.mil/default.asp> or contact Bill Dowell at [William.Dowell2@us.army.mil](mailto:William.Dowell2@us.army.mil).